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AUTHOR Fass, Sara; Garner, Barbara
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ABSTRACT

Designed for use by General Educational Development (GED) program teachers in GED classrooms, this set of learning materials provide learners with practice in graph and chart reading, calculation, analyzing information, and writing, while they examine the labor market, role of higher education, and economic impact of the GED. Unit 1, The Labor Market, contains these three lessons: What kinds of jobs are out there? What's happening to the jobs that do exist? and Wages. Unit 2, Pursuing Higher Education, has these two lessons: Education and Earnings, and Going to College. Unit 3, What the Research Tells Us, consists of these two units: Policy and the GED, and The Research. Components of each lesson are a list of goals/objectives, materials needed, step-by-step procedures, follow-up activities, and handouts. (YLB)

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Beyond the GED: Making Conscious Choices About the GED and Your Future

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Lesson Plans and Materials For the GED Classroom

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Beyond the GED:
Making Conscious Choices
About the GED and Your Future

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Lesson Plans and Materials
For the GED Classroom

By Sara Fass and Barbara Garner

NCSALL April 2000

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Introduction

GED instructors --- especially those who teach young people --- are often working with people who are interested in getting their GEDs because they hope or believe it will be the key to their economic futures. We firmly believe that receiving a GED credential is a valued step in an adult learner's life for many intangible reasons. We also believe that learners deserve to understand just what the GED will and won't do for them in economic terms. The National Center for the Study of Adult Learning and Literacy was eager to see research findings on the economic impact of the GED be made accessible to learners and teachers. So, with NCSALL's support, we set about developing classroom materials that could be used by GED teachers. The result is *Beyond the GED: Making Conscious Choices about the GED and Your Future*, a set of classroom materials designed to be used by GED teachers in GED classrooms. The materials provide learners with practice in graph and chart reading, calculation, analyzing information, and writing, while they examine the labor market, the role of higher education, and the economic impact of the GED.

We hope that by using these materials learners are better prepared to make wise decisions about their work lives as well as being better prepared to pass the GED. We also hope that adult basic education teachers use these materials as the basis for professional development for themselves, so that they can be better equipped to advise their students on career and educational decisions.

Thank You

The materials were all tested in GED preparation class, and reviewed for accuracy by John Tyler and Kathryn Parker Boudett, both of whom carried out much of the research cited in the materials. Thank you to: the learners in Sara Fass's class at Just a Start in Cambridge, MA; John Tyler and Kathryn Parker Boudett for their careful reading of the text; Amelia Kirby for reviewing and preparing the text; Sam Gordenstein for securing permission to reprint materials; and Carey Reid for reviewing the text.

Contact Us

If you find mistakes in the text or have suggestions for other activities, please contact me: Barbara Garner, World Education, 44 Farnsworth Street, Boston, MA 02210. Telephone (617) 482-9485; e-mail bgarner@worlded.org.

Unit 1 The Labor Market

Lesson 1 What Kinds of Jobs Are Out There?

Goals/Objectives

- Learners will understand several important labor market trends regarding jobs and employment.
- Learners will gain practice interpreting economic information from charts, tables, and graphs.
- Learners will examine which kinds of jobs are being created in our economy and identify patterns related to them.

Materials Needed

Handout #1.1A: Services vs. Products
Handout #1.1B: The Ten Occupations with the Largest Job Growth, 1996-2006
Handout #1.1C: Fastest Growing Jobs: Questions
Occupational Outlook Handbook
Newsprint

Procedure

1. Ask each learner to think of two friends or family members who are currently employed. List the jobs on pieces of newsprint posted around the room. As a group, discuss the following questions: What jobs are listed more than once? What, if anything, do these jobs have in common? Are there any categories of jobs that are missing from people's lists?

2. Study the graph "Services vs. Products" (Handout #1.1A). Review the categories "agriculture," "services" and "manufacturing/construction." Ask learners to brainstorm job titles that would be considered "services" and job titles that would be considered "manufacturing/construction." Write these job titles in two different columns on the board. Have learners answer the following questions based on the graph: What percentage of workers held manufacturing, construction, and mining jobs in 1950? In 1990? What percentage held service jobs in 1950? In 1990? If you were to add bars to this graph for the years 1900 and 2000, what would you expect the balance between the sectors to be? What can you conclude from this graph?

3. Refer back to the jobs posted on newsprint. Are any of these jobs manufacturing or construction-related? How many are service jobs? Ask learners to guess the average hourly earnings of the various jobs that are

listed on newsprint and written on the board. Use the Occupational Outlook Handbook to research actual wages. How do the wages of service jobs compare to the wages of manufacturing jobs? Why do you think that, in general, manufacturing jobs pay more than service jobs? (what role do unions play in this?). What are some other advantages of manufacturing jobs as compared to service jobs? Why is the decline of manufacturing jobs and the rise of service jobs a negative trend for lower skilled workers?

Note: Emphasize that while some service jobs pay very well, most service jobs are low skilled and low paying.

4. Study Handout #1.1B ("The Ten Occupations with the Largest Job Growth, 1996-2006"). Explain "mean" earnings. In small groups, have learners study the chart and answer the following questions (Handout #1.1C): How many of these jobs are service jobs? How many are manufacturing/construction? Are there any jobs that don't fit into either category? What relationship do you notice between the amount of education required for a job and the earnings associated with that job? What else did you learn from this chart?

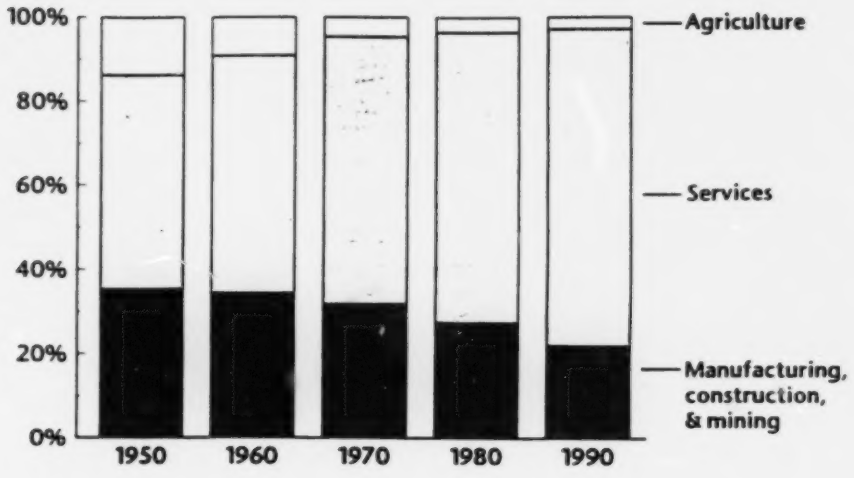
   Note: Be sure learners understand that these are the 10 occupations with the fastest predicted growth, and that many other jobs will also be growing. You might need to remind them that the chart isn't intended as a prescription for their career choices.

Follow-up Activities

- Research the status of manufacturing jobs in your community. Invite a speaker from the local Chamber of Commerce or other workforce development organization. Create a "manufacturing timeline" for your community that shows the history of local manufacturing sectors and companies.

HANDOUT #1.1A Services vs. Products

The changing composition of employment



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HANDOUT #1.1B
The Ten Occupations with the Largest Job Growth, 1996-2006

Job Title	Number of New Jobs Predicted	Mean Hourly Earnings, 1997	Mean Annual Earnings, 1997	Education/Training Required
Cashier	530,000	$6.96	$14,480	High school or less Short-term on-the-job training
Systems Analysts	520,000	$24.69	$51,360	Four-year degree or higher
General Managers/Executives	467,000	$29.31	$60,960	Four-year degree or higher Work experience
Registered Nurses	411,000	$19.91	$41,400	Four-year college degree
Retail Salespersons	408,000	$7.23	$17,970	High school or less Short-term on-the-job training
Truck Drivers	404,000	$13.08	$28,580	High school or less Vocational or on-the-job training
Home Health Aides	378,000	$8.31	$17,290	High school or less Short-term vocational training
Teacher Aides	370,000	$7.51	$16,550	High school or less Short-term on-the-job training
Nursing Aides, Orderlies, and Attendants	333,000	$7.76	$16,890	High school or less Short-term on-the-job training
Receptionists and Information Clerks	318,000	$9.00	$18,710	High school Short-term on-the-job training

HANDOUT #1.1C Fastest Growing Jobs: Questions

1. How many of these jobs are service jobs?

2. How many are manufacturing/construction jobs?

3. Are there any jobs that don't fit into either category?

4. What relationship do you notice between the amount of education required for a job and the earnings associated with that job?

5. What else did you learn from this chart?

Lesson 2 What's Happening to the Jobs that Do Exist?

Goals/Objectives

- Learners will explore the impact of the global economy, downsizing, and temporary work on employment in the U.S.
- Learners will examine some recent changes in the labor market that have benefited corporations at the expense of workers.

Materials Needed

Handout #1.2A: Temporary Work
Handout #1.2B: More Total Hours...And For What?
Handout #1.2C: U.S. Corporations Profit Globally and Destroy Jobs at Home
Handout #1.2D: Decline of Union Membership and Who Belongs to Unions
TV/VCR

Procedure

1. Ask learners how they think the economy is doing (they should think of the economy broadly as jobs, cost of living, etc.). Create two lists: positive aspects and negative aspects. For older learners, ask if they are doing better or worse economically now than they were 10 or 20 years ago and list some specific ways in which they are doing better or worse. Explain to learners that the focus of this lesson is to examine some major employment-related trends in the economy and consider who has most benefited from them.

2. Review Handout #1.2A (Temporary Work) with learners. What conclusion can you draw from this chart? What are the advantages to employers of hiring temporary workers? What are the implications for workers and the economy of such a large increase in temporary employment? What experiences have learners themselves had with temporary or involuntary part-time employment?

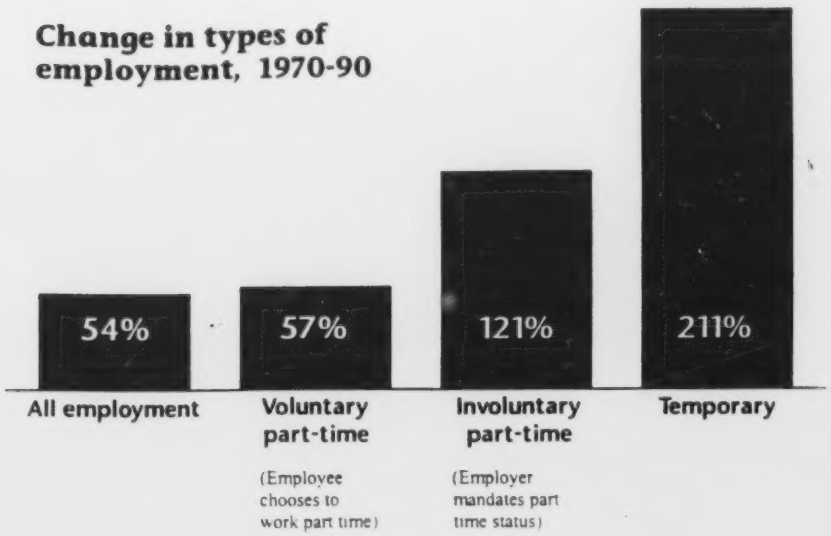
3. In small groups, assign learners one of the following handouts to study: Handout #1.2B(More Total Hours...And For What?), Handout #1.2C (Largest U.S. Corporations Profit Globally and Multinational Corporations Add Jobs Overseas While Destroying Jobs at Home*), and Handout #1.2D (Decline of Union Membership and Who Belongs to Unions?). Give the groups 15 minutes to analyze their handout, then have each group report on what they learned.

* Be sure to let students know that the jobs being created in foreign countries are even worse than the jobs created here, paying many workers less than $1.00 an hour and forcing them to work long hours in sweatshop conditions. For more on global sweatshops, contact the National Labor Committee, at (212) 242-3002, 275 Seventh Avenue, 15th Floor, New York, NY 10001.

As an introduction to this unit, or as a follow-up activity:

Show students excerpts from Michael Moore's film, The Big One, which features many short, "humorous" episodes in which Moore confronts corporations and CEOs about downsizing and globalization.

HANDOUT #1.2A Temporary Work



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Consider these Facts:*

- Manpower Inc., a Milwaukee-based temporary employment agency, is the biggest private employer in the U.S.: 560,000 workers.
- Temporary agencies supply 1.5 million people each day to U.S. companies: three times more than 10 years ago.
- Another 34 million Americans are other types of contingent workers: part-timers, hourly, weekly, or other temporary.

* From Corporate Power and the American Dream: Toward and Economic Agenda for Working People, Draft 4, 1995. Reprinted with permission of The Labor Institute.

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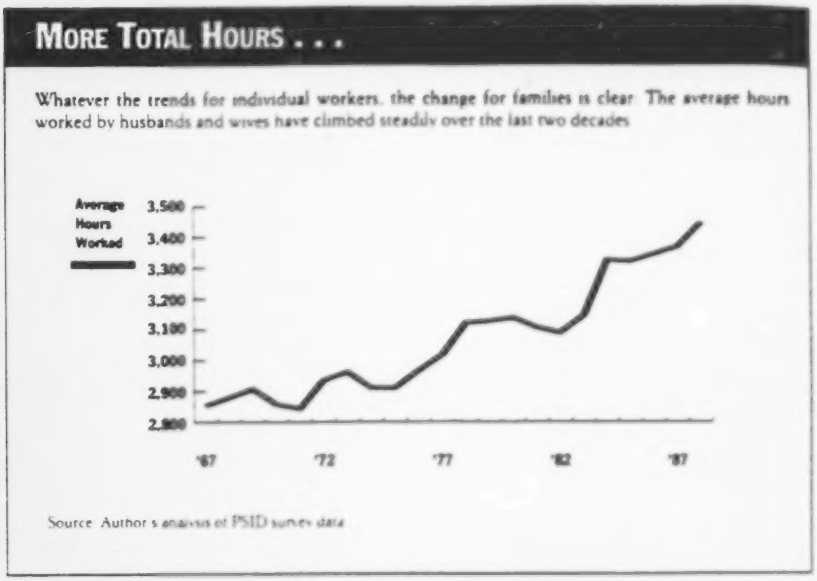
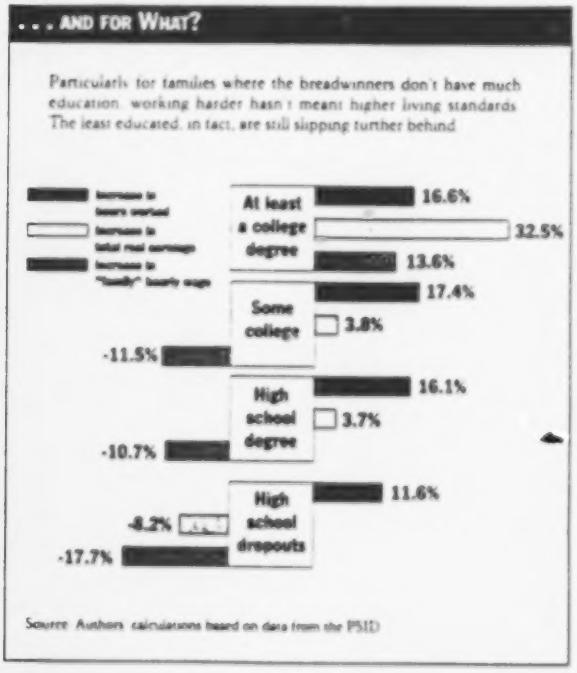
HANDOUT #1.2B More Total Hours...And For What?





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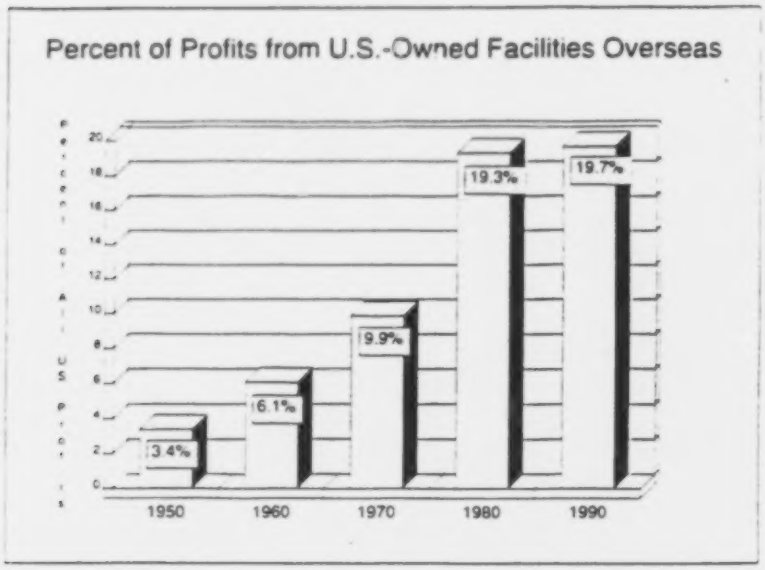
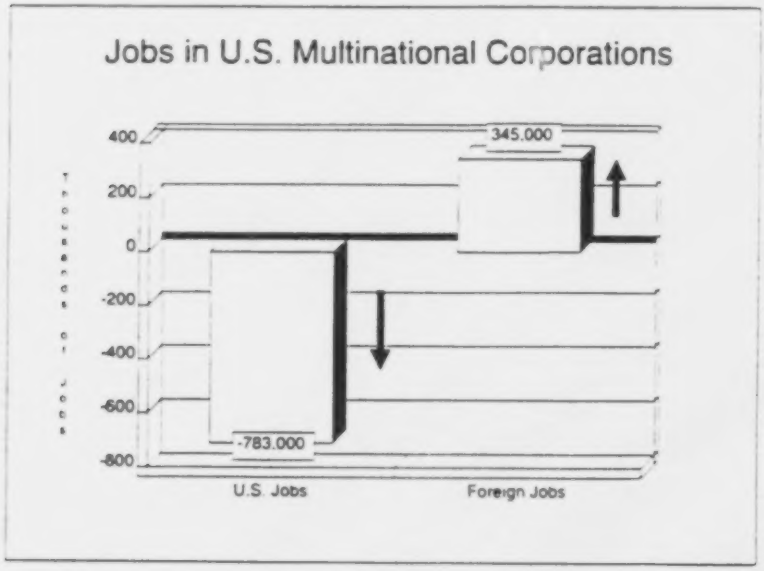
HANDOUT #1.2C US Corporations Profit Globally; Destroy Jobs at Home



Source: *Economic Report of the President 1993*. Washington, DC: US GPO. 1993.

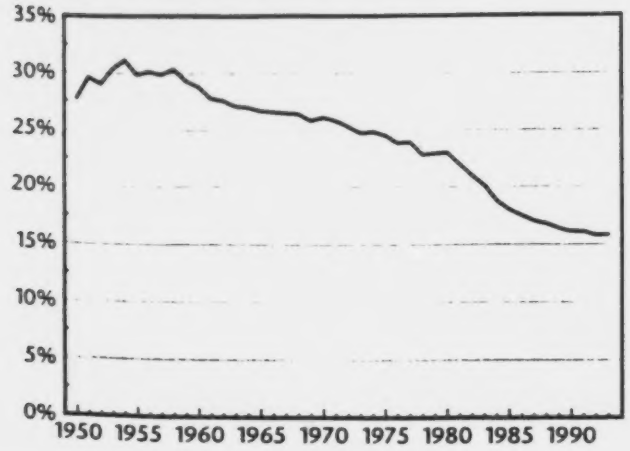


Source: U.S. Department of Commerce, *Survey of Current Business*, June 1994.

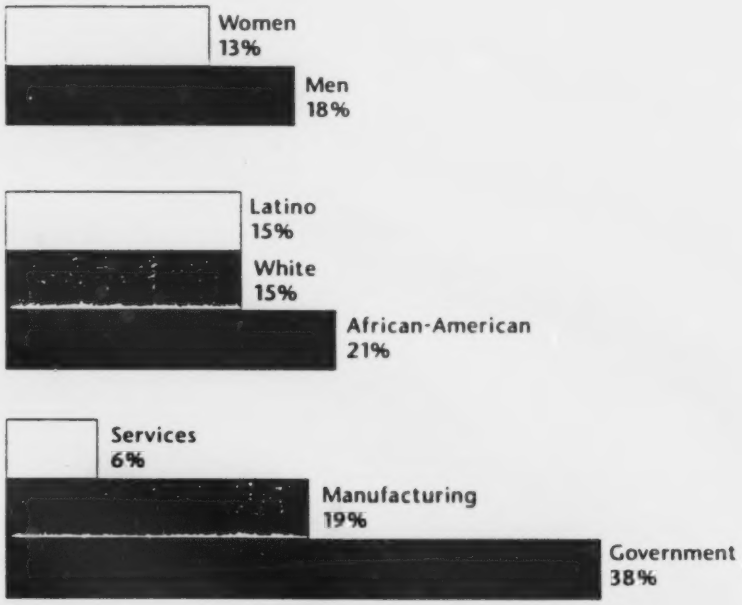
From Corporate Power and the American Dream: Toward and Economic Agenda for Working People, Draft 4, 1995. Reprinted with permission of The Labor Institute.

HANDOUT #1.2D Decline of Union Membership
Who Belongs to Unions?

Unionized employees as a percentage of all employees, 1950-93



Percentage of all employees in various groups belonging to unions in 1993



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Lesson 3 Wages

Goals/Objectives

- Learners will examine labor market trends related to wages.
- Learners will consider the history of the minimum wage and will understand the difference between minimum and living wages.
- Learners will calculate a living wage for workers in their communities.
- Learners will practice creating and answering GED-type questions based on charts, graphs, and tables.

Materials Needed

Handout #1.3A: Declining Hourly Wages
Handout #1.3B: Weekly Paychecks
Handout #1.3C: Minimum Wage
Handout #1.3D: Minimum Wage: GED Questions
Handout #1.3E: A Living Wage

Procedure

1. To help learners prepare for the Social Studies GED test, it is often helpful to have them try their hands at composing and answering their own GED questions. In pairs or small groups, have learners study the graphs on Handouts #1.3A and #1.3B, agreeing on a correct answer to each question and creating two additional answers that are incorrect, but sound plausible. Before the groups begin work, be sure to explain the meaning of *real* or *constant* dollars and *buying power* (related to the chart on Handout #1.3A) and *median* weekly earnings (Handout #1.3B).

2. Read the article on Handout #1.3C about the minimum wage. Ask learners to develop at least three GED-type questions (and answers) based on the information from the passage and accompanying graphs (Handout #1.3D).

3. In the past several years, people from cities across the country, including Boston, Somerville, and Cambridge, have fought for living wage laws in their communities. Living wage laws require employers who receive city contracts, tax assistance, or economic development funding, to pay a living wage to their workers. (In some cases, living wage laws also require that

workers receive health benefits.) A living wage is the amount of money a full-time worker would need to earn per hour in order to live above the poverty level. Have learners calculate what they believe would be a realistic "living wage" in their communities. Learners should first brainstorm the main expenses people have (i.e., rent, food, health care, child care, etc.) and assign realistic figures to each of these expenses. (You might want to create a specific scenario, such as single mom with two kids, one of whom needs child care.) Learners will determine a yearly budget and then work backwards to calculate an hourly "living wage" assuming a 40-hour week (see Handout #1.3E).

Follow-up Activities

- Learners could invite a local worker rights organization such as Jobs with Justice to make a presentation at their school. Jobs with Justice can be reached at (202) 434-1106, 501 Third Street NW, Washington, DC 20001-2797.

- Have learners imagine themselves a year in the future. What will their expenses be? Have them calculate their own living wage needs, addressing their minimum, rather than extravagant, expenses.

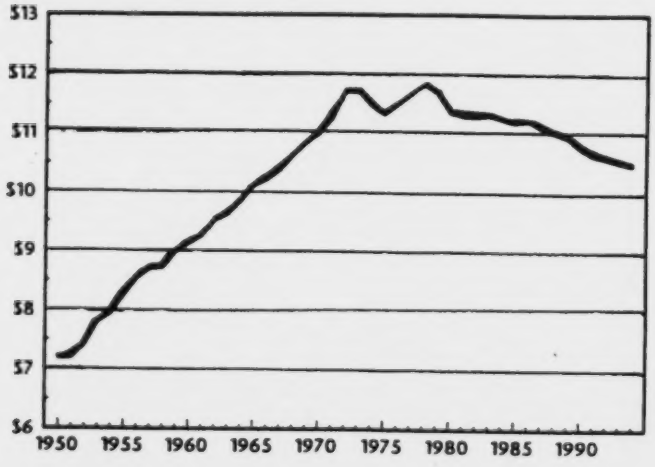
- Check out the New Party's Living Wage campaign website at www.newparty.org/livwag/. It documents living wage campaigns across the country and answers frequently asked questions about the living wage.

HANDOUT #1.3A Declining Hourly Wages

Based on the chart, develop three answers to the following questions, including one correct answer and two incorrect, but plausible, answers.

From the 1950s to the mid-1970s, real average hourly earnings steadily increased, giving most ordinary people a sense of economic progress. After 1973, that progress ground to a halt. Wages for most workers are declining or stagnant (staying the same). In addition, racial and ethnic differences in earnings have become more extreme.

Average hourly earnings, 1950-94
(private nonagricultural nonsupervisory or production workers, in $1992)



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1. In 1993, approximately how much were the average hourly earnings for production and nonsupervisory workers?

a. _____

b. _____

c. _____

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2. Wages for production and nonsupervisory workers were at their peak in what year?

a. _____

b. _____

c. _____

3. In which two decades did average hourly earnings consistently rise?

a. _____

b. _____

c. _____

4. Which of the following conclusions is supported by the information in the graph?

a. _____

b. _____

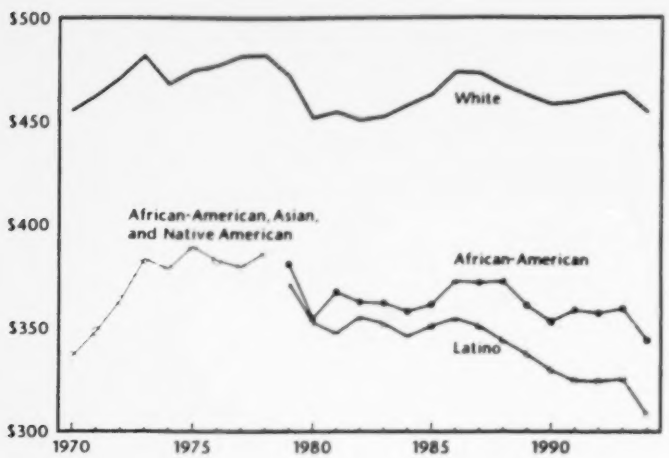
c. _____

HANDOUT #1.3B Weekly Paycheck

Based on the chart, develop three answers to the following questions, including one correct answer and two incorrect, but plausible, answers.

Racial and ethnic differences in earnings have become more extreme. The Census Bureau did not publish distinct statistics on African-Americans and Latinos until 1979. But people of color, in general, narrowed the pay gap with whites substantially between 1970 and 1978. After 1979, that gap increased.

Median weekly earnings of full-time workers, 1970-94 ($1992)



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1. The median weekly wages of white workers were highest in what year?

a. _____

b. _____

c. _____

2. Which population group experienced the sharpest decline in median weekly wages between 1979 and 1994?

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2. Which population group experienced the sharpest decline in median weekly wages between 1979 and 1994?

a. _____

b. _____

c. _____

3. In 1994, the difference between the median weekly wages of white workers and African-American workers was:

a. _____

b. _____

c. _____

4. Which of the following conclusions is supported by the information in the graph?

a. _____

b. _____

c. _____

HANDOUT #1.3C The Minimum Wage

What is the minimum wage?
Who sets the minimum wage?
What kinds of jobs earn the minimum wage?
What is meant by the term "living wage"?

When the minimum wage was first introduced in 1938, it was meant to be only a *transitional* wage, not a *living* wage. Like unemployment insurance and welfare, the minimum wage was meant to support workers in between jobs or during off-seasons. The idea was that a minimum wage job would tide you over until you landed a "real job" at a living wage, or got called back to your regular job.

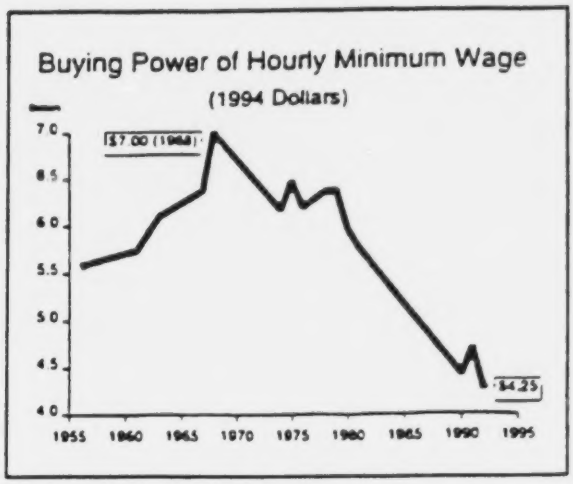
Nowadays, the minimum wage has a powerful effect on the wages of millions of workers. For example, an increase to $6.50 per hour would improve the living standard of the five million workers who receive the present $5.15 minimum.* An increase would also help at least 15 million other workers, who earn between $5.15 and $6.50 an hour, to make ends meet.

What would be a realistic minimum wage now? If the minimum wage were set at one-half the average factory wage, as it was intended to be in the first place, the federal minimum would be about $7.00 per hour. If we set it at a family survival level, the inflation in medical, housing, and educational costs of recent years would require a rate of $10 or more per hour.

Many politicians argue that raising the minimum wage will eliminate jobs because employers will be unable or unwilling to pay increased wages. Others argue that only young people hold minimum wage jobs, and that those responsible for families earn more. However, several studies have shown that past increases in the minimum wage were followed by an *increase* in people being hired at the higher minimum wage rate. Jobs actually went up, not down. Moreover, a "ripple" effect occurs in which employers increase the pay of higher-level employees so as to maintain the established pay structure.

*This is the Federal minimum, which states must meet. States may set higher minimum wages. Find out what the minimum wage is in your state.

HANDOUT #1.3C (continued)



MINIMUM WAGE WORKERS: A SNAPSHOT

62% of minimum wage workers are female.

31% are people of color.

70% are adults.

36% are their family's sole wage earner.

33% are poor or near-poor.

9% receive food stamps.

4% receive welfare.

Average weekly earnings: $114.40

Source: David Card & Alan Krueger, *The New Economics of the Minimum Wage*, 1995. Figures are for 1990.

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Top graph from Corporate Power and the American Dream: Toward and Economic Agenda for Working People, Draft 4, 1995. Reprinted with permission of The Labor Institute. Bottom graph from Dollars and Sense, July/August 1995.

HANDOUT #1.3D Minimum Wage: GED Questions

Based on the information from the passage and the accompanying graphs, develop three GED questions (and answers).

1. _____?

a. _____

b. _____

c. _____

2. _____?

a. _____

b. _____

c. _____

3. _____?

a. _____

b. _____

c. _____

HANDOUT #1.3E A Living Wage

What are the main expenses that people have?

1.

2.

3.

4.

5.

6.

7. Other

Complete the following chart:

EXPENSE	MONTHLY COST	YEARLY COST
1.		
2.		
3.		
4.		
5.		
6.		
7. OTHER		

Add up the yearly totals. This is the overall salary needed by a family of three. Work backwards to calculate an hourly living wage.

Unit 2 Pursuing Higher Education

Lesson 1 Education and Earnings

Goals/Objectives

- Learners will explore the economic impact of higher education, particularly college.

- Learners will examine the connection between education and earnings for a variety of occupations.

Materials Needed

Handout #2.1A: Closing the Gap
Handout #2.1B: Closing the Gap: Questions
Handout #2.1C: Earnings by educational attainment, 1993, Earnings by educational attainment, 1996, and Median weekly earnings by selected characteristics, 1998;
Handout #2.1D: Occupations and earnings chart
Internet or Occupational Outlook Handbook

Procedure

1. Read the article "Closing the Gap" (Handout #2.1A). Answer the following questions based on the reading (Handout #2.1B):

- What did you learn from reading this article?
- What is the main message the author is trying to convey?
- What is meant by a "wage premium"?
- What are employers looking for in the "new economy"?
- If someone earns $30,000 per year, what is his/her hourly wage?

Have learners write a summary of the article for other GED students.

2. Study the charts on Handout #2.1C (Earnings by educational attainment, 1993, Earnings by educational attainment, 1996 and Median weekly earnings of full-time wage and salary workers by selected characteristics, 1998). In small groups, have learners prepare sample GED questions and answers based on the charts. Also please notice the differences in the sources of the educational attainment charts, as well as the difference in criteria (mean earnings in 1993/median earnings in 1996). Use these charts to discuss the importance of paying attention to the source from which data is drawn.

3. Brainstorm the various occupations that are of interest to students in the class. Using the Occupational Outlook Handbook or the Internet (http://stat.bls.gov/ocohome.htm), complete the chart on Handout #2.1D. What patterns do learners notice?

HANDOUT #2.1A Closing the Gap

Adapted from "Closing The Gap," a study by the Massachusetts Institute for a New Commonwealth, 1997

A generation ago, practically any adult who was willing to work hard could work his or her way into the middle class, earning enough money to raise a family regardless of education level or knowledge of specialized skills. Those with only a high school diploma, and even those who had dropped out of high school, could find a job, work hard over the years, and earn enough to support their families.

Today, the number of jobs that require only effort and hard work has shrunk dramatically. American companies are placing greater importance on the skills, initiative, teamwork, and common sense of its workers. Employers are looking to hire workers who speak English well, who read and write at high school levels, who are comfortable with numbers and can operate computers, and who can communicate effectively both orally and in writing with fellow workers.

This trend can be put into dollars and cents. In Holyoke, Massachusetts, for example, job applicants with good reading, math, and work skills can find good entry-level jobs with local manufacturers at $12 an hour or more (about $24,000 a year), even if they have no vocational skills specific to the particular company hiring them. On the other hand, applicants with limited English or with poor reading and math skills will have to settle for jobs as laborers – jobs paying $5 to $7 an hour. High school literacy has thus become a critical job skill.

But a high school education isn't enough. The surest path to a middle-class income is to complete at least two years of education beyond the high school level. Surveys by the state's community colleges show that in their first year on the job, graduates earn an average of $25,000 to $30,000 a year. After a few years on the job, they can expect to be earning $35,000 or more. This is roughly twice the pay of those completing short-term vocational courses lasting only 3 to 6 months.

The middle class is dividing increasingly into two distinct groups: those who have college educations are moving ahead in the new economy and those who have high school degrees or less are falling behind. For people with a high school education or less, wages and incomes are falling, career prospects are decreasing, and the unions that used to help protect wages and working conditions are weakening.

The increased skill levels demanded by business are reflected in the ever-increasing wage premium paid to those with a college education. National

data show that in 1995 male college graduates aged 25-34 earned 52% more than high school graduates; the premium had been only 19% in 1980. Those with some college (but no degree) earned 11% more than high school graduates. For women, the effect of education on income is even greater. In 1995, female college graduates earned 91% more than high school graduates; those with some college earned 28% more. Associate degree holders (those who have completed a two-year degree) can also expect a substantial income premium of 26% for males and 45% for females compared to workers with only a high school degree.

HANDOUT #2.1B Closing the Gap: Questions

What did you learn from reading this article?

What is the main message the author is trying to convey?

What is meant by a "wage premium?"

What are employers looking for in the "new economy"?

If someone earns $30,000 per year, what is his/her hourly wage?

HANDOUT #2.1B (continued)

Write a summary of the article for other GED students.

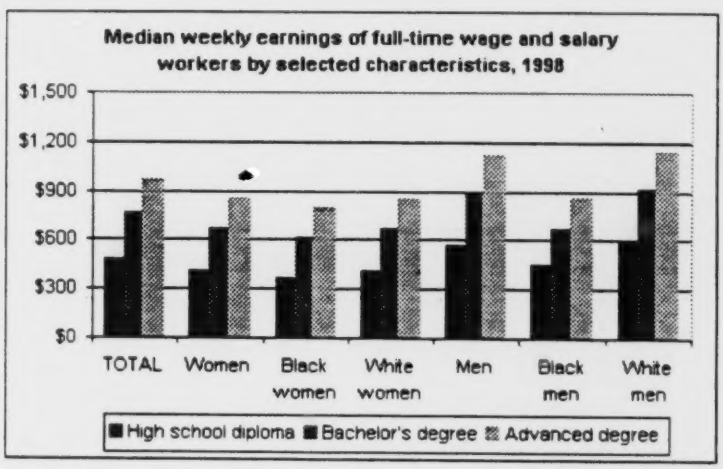
HANDOUT #2.1C Earnings by educational attainment, 1993, Earnings by educational attainment, 1996, and Median weekly earnings by selected characteristics, 1998

Earnings by educational attainment, 1993			
Education Level	Mean annual earnings	Premium over high school graduates (percent)	Premium over high school graduates (dollars)
Master's Degree	40,932	147	24,372
Bachelor's Degree	31,500	90	14,940
Associate's Degree	23,820	43	7,260
Some College	18,948	14	2,388
High School Degree	16,560	------	------

Digest of Educational Statistics, 1999

Earnings by Educational Attainment, 1996			
Education Level	Median Annual Earnings	Premium over high school graduates (percent)	Premium over high school graduates (dollars)
Master's Degree	46,269	98	22,952
Bachelor's Degree	36,155	55	12,838
High School Degree	23,317	-----	-----

Bureau of Labor Statistics , 1999



Bureau of Labor Statistics, 1999

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HANDOUT #2.1D Occupations and Earnings Chart

Occupation	Education Required	Median Annual Earnings	Median Hourly Earnings	Advancement Opportunities

Lesson 2 Going to College

Goals/Objectives

- Learners will consider what motivates themselves and others to obtain a GED.
- Learners will understand the various levels of higher education and the differences between college and vocational training.
- Learners will consider their own reasons for attending or not attending college.

Materials Needed

Handout #2.2A: Survey of GED Students
Handout #2.2B: Survey of GED Recipients
Handout #2.2C: Questions about College
Handout #2.2D: Post-Secondary Education: Vocabulary

Procedure

1. Have learners conduct a survey of all the GED students in their school (Handout #2.2A). Using Excel or some other graphing package, organize the results of the survey into a bar graph or circle graph.

2. Review the results of the school survey on reasons for obtaining the GED. Ask learners what they think about the following statement: 2/3 of all GED test-takers say that they are getting their GED to further their education, but less than 20% have completed one year of college by age 26, and less than 2% of GED graduates complete a bachelor's degree by age 26. Why is this the case? Have learners conduct another survey, this time of GED recipients who completed the GED at least five years ago. Use Handout #2.2B or have the class develop their own survey.

3. Ask learners if they have ever thought about going to college. On newsprint, record answers to the following questions: What are some reasons why you have thought about going to college? What are some reasons why you might not go to college?

4. Review the following vocabulary about post-secondary education with the class: Associate's Degree; Bachelor's Degree; Master's Degree; Certificate Program; etc. (See Handout #2.2D).

5. Bring into class a number of catalogues from local two-year and four-year colleges. Ask learners to look through the catalogues and note any questions they have (Handout #2.2C).

6. Invite a GED recipient who is now in college to speak to the class. What are the biggest challenges this person is facing? What advice would they give to GED graduates about going to college?

Follow-up Activities

- Based on what you have learned, imagine that you are giving a presentation to high school students or other GED students. What would you include in your presentation?

HANDOUT #2.2A Survey of GED Students

What is the *main reason* you decided to get your GED? (check one)

_____ Get a better job

_____ Go on to college

_____ Go on to vocational training

_____ Improve self-esteem/self-confidence

_____ Get into the military

_____ Other: _____

HANDOUT #2.2B Survey of GED Recipients

What have you done since obtaining your GED (check all that apply):

_____ Found a better job

_____ Attended college*

_____ Attended vocational training**

_____ Improved my self-esteem and self-confidence

_____ Joined the military

_____ Other: _____

*If you went to college after obtaining your GED, how many years of college did you complete:

_____ Less than one

_____ One to two (no Associate's Degree)

_____ Two (obtained Associate's Degree in: _____)

_____ Two to four

_____ Four (obtained Bachelor's Degree in: _____)

**If you attended vocational training after obtaining your GED:

What did you study? _____

How long was the training? _____

Did you complete the training? _____

HANDOUT #2.2C Questions about College

Write your questions here:

1. _____

_____

2. _____

_____

3. _____

_____

4. _____

_____

5. _____

_____

HANDOUT #2.2D Post-Secondary Education: Vocabulary

Post-Secondary Education

Certificate Program

Associate's Degree

Bachelor's Degree

Vocational (off-job) Training

Proprietary School

On-the-Job (Company) Training

Free Application for Federal Student Aid (FAFSA)

Pell Grant

Unit 3 What the Research Tells Us

Lesson 1 Policy and the GED

Goals/Objectives

- Learners will examine the connection between the GED and the decision to stay in or drop out of school
- Learners will consider the role of the GED in government policy

Materials Needed

"What Impact Does the GED Have Upon Earnings" by Barbara Garner, *Bright Ideas*, Vol. 6, No. 4.
Handout #3.1 A: Public Policy and the GED

Procedure

1. Lead a discussion about why the learners decided to drop out of school. What encouragement were they given to stay or to leave? By whom? What did they know about others who had dropped out before them?

2. Examine the role institutions play in encouraging or discouraging students to drop out. Ask the learners if they are familiar with their high school's drop out policy (explicit or implicit). Have the learners contact some schools to find out their policies on dropping out. Why might schools tacitly encourage some students to drop out?

3. Lead a discussion that serves as a lead in to the reading. What role might the GED play in a student's decision to leave school and in a school's policy on dropping out? (For example, what happens if GED holders, in general, earn as much as young people who have completed regular high school? What might happen if there were no alternative degree program such as the GED? Did knowledge of the GED option influence learners' decisions about leaving school?)

4. Provide some background information on the GED: It was created to enable World War II veterans to earn a high school credential. Many of them had been pulled out of high school before they graduated, fought in the war, and it was thought that they were too old and had been through too many experiences to return to class with young people after the war. Today, almost one in six high school credentials awarded each year are based on the GED.

5. Ask the learners who pays for the GED program they attend. Why do the state and Federal government support GED programs?

6. Have learners read Handout 3.1A. Answer the following questions based on the reading (Handout #3.1A)

- What did you learn from reading this?
- Why role does the GED play in government policy?
- Why is it important to study the economic impact of the GED?
- What are some of the intended outcomes of the GED program?
- What might some of the unintended results of the GED program be?
- The handout discusses the mechanisms around the economic impact of the GED. What are some of the social and personal benefits of participating in a GED program and getting a GED?

Follow up Activities

- Have learners interview people who have the GED to find out whether getting the GED has made a difference to them and what kind of a difference it made.

What Impact Does the GED Have Upon Earnings?

by Barbara Garner

I cry at every GED graduation ceremony I attend. The graduates, dressed in their best. Flowers from beaming boyfriends or husbands or girlfriends or wives. And the children, their hair carefully combed, their patent leather shoes or shiny black oxfords, lacy dresses or little blue suits. The pride. Of course the GED has an impact.

But does it really?

Studies on the impact of the GED find it has a strong effect on recipients' "self-limiting beliefs" or negative self-esteem. Those are the results teachers, counselors, and program administrators see and can describe and document. They are significant, powerful results indeed. But many students return to school hoping to find a way to get better jobs and make more money, and it is these students' interests I will address in this article.

What effect does the GED have upon earnings? A 1994 study by Stephen Cameron and James Heckman suggests that the earnings of male GED recipients in the early stages of adulthood are statistically indistinguishable from the earnings of drop outs. In other words, young male GED holders and drop outs earn about the same amount. A study by Richard Murnane, John Willett, and Katherine Boudett found that the economic benefits of the GED to young males is slight and the main benefit is it allows holders entry into post-secondary education and training.

Until recently, the ability of adult basic education to increase the earning power of women was assumed rather than empirically studied. In 1996, this relationship was addressed by two studies, one by Tim Maloney and one by Jian Cao, Ernst Stromsdorfer, and Gregory Weeks. Both studies used econometric modeling to estimate the impact of the GED on wages and on hours of work, which together determine earnings. They examined the differences between three groups of females: secondary school drop outs, drop outs who become GED recipients, and high school graduates.

Until recently, the ability of adult basic education to increase the earning power of women was assumed rather than empirically studied.

Maloney estimated the impact that obtaining a GED or completing a regular high school education would have on young female drop outs. He found that results were minimal in terms of wages. In the first few years after graduation, female diploma holders earn 2% more than drop outs and GED holders earn 1% more than drop outs. The real difference is in number of hours worked. Females who hold high school diplomas work on average 17% more hours than drop outs; females who hold GED certificates work on average 8% more hours than drop outs. The overall result is that female GED holders do benefit from an increase in earnings relative to drop outs.

Cao, Stromsdorfer, and Weeks found that differences in years of education and scores on a basic skills test rather than possession of a diploma or GED seem to account for much of the difference between the three groups in wages. Contrary to Maloney, they found that education level made no difference to number of hours worked. Cao et al found that GED recipients have higher wages than drop outs and lower ones than graduates. Using another database, they found that wages were the same for all three groups. This last finding is of note because this database, while not a nationally representative sample, examines a wider age range of women ages 22 to 50, indicating that the gap in earnings may close over the life span.

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What Impact...

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Little research refutes their findings. Mark Johnson and Thomas Valentine compiled 57 studies of the impact of the GED and found "very little of it of high scholarship." The studies' main findings match what our experience in programs tells us: GED recipients gain in self esteem. So, despite the limitations of the studies I have mentioned, we should pay attention. Female GED holders do better in the labor market than do drop outs, but worse than high school graduates and much of the difference can be explained by the length of time the recipient stayed in school before dropping out. Of course, this is statistical modeling, and we all know folks whose experience seems to belie the research. But, on average, for young people, it is only when the GED is used as a stepping stone towards higher education that it really becomes a route towards economic betterment.

As I read the empirical research, I did a little informal research of my own. I mentioned what I was learning to friends who are or were ABE or GED or ESOL teachers. "Do you know that GED holders barely earn more than drop outs?" " No, I didn't know that," was the most frequent response I got. Then I asked some students. They didn't know it either.

This income information is important, because not only do GED holders, on average, earn little more than high school drop outs, but the wage difference between high school diploma holders and college graduates has grown enormously in the past 15 years. Young high school diploma holders—especially males—are earning less while college degree holders, after a few years in the job market, can expect their wages to grow. So even if GED holders were earning on a par with high school diploma holders, they would be hard-pressed to support a family on their wages.

Teachers, and many students, know that the GED is only the beginning. In a more formal study I conducted, teachers' burning desire to prepare their students for "more than the GED" surfaced again and again. And students also talk of plans for higher education and training. Not many, however, and certainly not enough, act on those plans.

We in adult education should know as much as we can about the impact of the test that drives much of our work. What can we do with this knowledge? We can scrutinize our fliers and brochures and make sure that they do not, even unintentionally, paint the GED as the answer to all economic needs, but as the first step towards a possible solution. While recognizing that many barriers prevent students from continuing, we can gently nudge, encourage, direct, and prepare them for higher education or training.

To sum up, getting a GED has considerable—and invaluable—impact on recipients' self-esteem, but relatively minor impact on income, unless it is used as a key to entry into further education and training. We need to know that, students need to know that, and we all need to act on that knowledge. ●

Barbara Garner is the Editor of Focus on Basics *which is published by the National Center for the Study of Adult Learning and Literacy. She can be reached at World Education (617) 482-9485.*

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Handout #3.1A: Public Policy and the GED

Federal and State governments spend millions of dollars on GED programs each year. GED programs are part of public policy strategies to increase the employability of public assistance recipients and other low income people. GED programs are also seen as a means to other social goals such as increased literacy for children of adults with limited literacy skills and decreased recidivism of prison inmates. The impact of the GED on the economic welfare of its recipients is of prime importance to government agencies and policy makers, who might choose to change their policies if they found that the economic impact of the GED was negligible.

In addition to government agencies and policy makers, GED program administrators, teachers, and learners are also interested in the role played by the GED in helping GED holders attain their economic goals. They would also like to understand what the impacts --- intended and unintended --- of the GED are.

Here are some examples of the incentive, or disincentive, the GED can provide:

1) If GED holders earn, on average, as much as regular high school diploma holders, the incentive to stay in school and graduate is decreased. Policy makers might then consider raising the minimum age at which high school drop outs are allowed to receive the GED to counteract this.

2) If GED holders earn more than drop outs who do not have GEDs, but not enough to bring them out of poverty, the incentive to stay in high school is increased. Policy makers might want to publicize this information so that high school students can consider their economic futures when deciding whether or not to drop out of school.

3) If GED holders earn more than drop outs who did not complete GEDs, the incentive to earn a GED is increased. GED programs might want to publicize this information to draw in and retain GED students.

4) If some years in college are necessary to considerably raise income, the incentive to go to college is increased. Program designers and teachers might want to ensure that their curricula prepare learners for the academic and social demands of college. Learners might recognize the need to get high scores on the GED tests rather than just passing. Policy makers might want to create incentives that enable programs to structure themselves so that GED students are readied for college.

Lesson 2 The Research

Goals/Objectives

- Learners will gain practice understanding research findings
- Learners will examine the connection between the GED and earning power

Materials Needed

Handout #3.2A: Vocabulary
Handout #3.2B: What the Research Says
Internet Access

Procedure

1. Ask learners what they think of when they hear the word "research." Who conducts research? About what kind of issues? What are the purposes of research? Explain that a lot of research has been done in recent years to better understand the relationship between the GED and earnings. How do learners think this kind of research is conducted? Interviews, surveys, quantitative, qualitative. Point out that the surveys learners conducted in an earlier lesson are a form of research.

2. Review the following vocabulary used in research with the class (see Handout #3.2A): Constant, Correlation, Empirical, Qualitative, Quantitative, Sample; Simple Random Sampling, Variable

3. Explain that the learners are going to be reading an article that highlights the results of a number of studies on the economic impact of the GED. How could the GED have a positive effect on earnings? What do the learners think the results of the studies they will be reading about might be, and why? Do they think that the findings will be the same for men as for women? Why or why not? Do they think that the findings will be the same for those from different ethnic or racial groups? Why or why not? What are some other characteristics that might lead to different outcomes in the labor market?

4. Hand out Handout #3.2B. Have the learners read it, and work in small groups to answer the questions to each section.

5. As a large group, discuss the key findings. Were they surprising? If yes, why? If no, why not? Does it make them think differently about preparing for the GED?

6. Have the learners examine the printed materials (brochures, fliers) that advertise their GED program, and have them take a look at the official GED web site: www.acenet.edu/programs/CALEC/GED. What message do they convey about the GED? Does this research support this message?

Follow-Up Activities

- Given the findings of these researchers, prepare a presentation for high school freshmen who are thinking about dropping out.
- Look on the internet for other information regarding the economic impact of the GED. Does it contradict or confirm what this research tells us? In what ways?

Handout #3.2A Research Vocabulary

MATCH THE TERM WITH THE CORRECT DEFINITION

Sample	Something that is derived from actual observation or experiment, as compared to theoretical
Simple random sampling	Any identical characteristic of all members of a sample or population
Variable	
Correlation	The extent to which two or more things are related
	Any subset of a population
Qualitative research	
	A sampling procedure in which every member of the population has equal and independent chance of being chosen to be in the sample
Quantitative research	Research that is handled numerically
Constant	
	Any characteristic on which the elements of a sample or population differ from each other
Empirical	Research that looks at distinguishing characteristics, but does not quantify those characteristics

Handout #3.2B What the Research Says

Over the past few years, a team of educational researchers based at the Harvard Graduate School of Education and Brown University has been studying the economic impact of the General Educational Development (GED) credential. They have been trying to understand whether young people who gain GEDs after dropping out of the formal school system earn more, on average, than their peers who dropped out and did not get GEDs.

Economists have found that, for the general population, average earnings vary by race, gender, and skill level. So, the research team has also examined whether the earnings of GED holders vary by race, by gender, or by their scores on GED tests. They have tried to differentiate between the impact of the GED credential and other, harder-to-observe factors such as personal motivation. In other words, if two people dropped out of high school and one earned a GED while the other did not, and they were relatively equal on all other characteristics, what happens to earning power? Does the person with the GED earn more?

The answer to this question may seem obvious. Most people would say, of course the person with the GED earns more. But researchers have tried to show that empirically. They have also tried to learn why. Is it because of the GED itself, or because of personal characteristics such as motivation or work ethic?

The researchers have also tried to understand whether drop outs with the GED engaged in more training, post secondary education, and military service than drop outs without the credential. The hypothesis is that GED holders do enroll in more higher education programs and military service than drop outs without the GED, because a high school diploma or GED is often needed for entry.

This article will examine the results of four research studies.

Access to Post-Secondary, Training, Military Service

The first study, by Richard J. Murnane, John B. Willett, and Kathryn Parker Boudett, used empirical data from the National Longitudinal Survey of Youth. This is an annual survey which asks detailed personal, educational, and labor market questions of a random sample of more than 12,000 men and women who were age 14-21 in 1979. The authors studied a subset of these respondents who dropped out before finishing high school. Because they used a fairly sizable random sample drawn from the population, they can generalize from the study to the whole population of drop outs.

The Murnane, Willett, and Boudett study examined how the acquisition of the GED affected the likelihood that high school drop outs would obtain training, post-secondary education, or enter military service. The researchers also tried to understand whether the differences in use of post-secondary education, training, and military service between permanent drop outs and those

with GEDs resulted from differences inherent in the drop outs (those intangibles), or were attributable to the GED credential. For example, perhaps the people who got GEDs had more motivation overall than those who did not, and the motivation, rather than the GED, was what resulted in the differences.

The researchers found that the probability that a drop out participated in post-secondary education or training (not on-the-job training) increased after the drop out received a GED, and was not related to other observable characteristics in the drop outs. This held true for both men and women. However, fewer than 50% of the GED recipients in the study had entered post-secondary education or training by the age of 26, and only 20% of GED recipients completed one year of college by age 26.

On the other hand, the probability that a drop out, with or without GED, would enroll in military service was dependent upon characteristics held by the drop out upon the time of leaving school, like family history of military service, and not upon whether the person had a GED. The authors of this study point out that their findings do not indicate that the GED, military service, and training systems are well designed policy responses to the problems of drop outs, or are effective institutions. Their findings show only that the GED is a route into these existing institutions for high school drop outs.

- What are this research study's main findings?
- Do they surprise you?
- Why do you think so few GED recipients attend college?
- What are the comparable statistics for high school graduates?
- Why do you think there is such a big difference?
- What might be done to increase the number of GED recipients who attend college?

Effect of the GED on Male Earnings Over Time

Another study by the same team, also using the National Longitudinal Survey of Youth, examined whether male high school drop outs' wages, annual number of hours worked, and annual earnings are affected by the acquisition of the GED. The researchers examined how, over time, the GED alters wages and hours in the labor market. They looked at how this differed by race and ethnicity. In other words, do GED holders work more hours over the course of a year than their peers without GEDs? Do they earn more per hour? Do they earn more over the course of a year? And does this vary by race? (They were only looking at young males.)

They found that the GED has a positive effect upon the rate of wage growth for young males, regardless of race. GED holders earned more than their peers without GEDs. Sometimes the higher earnings were due to higher hourly wages, sometimes the GED holders worked more hours per year (that is, non-GED holders experienced greater unemployment or greater "under"employment than GED holders). However, acquisition of the GED did not bring people out

of poverty. In this study, they found that the earnings gain of GED holders, as compared to drop outs without GEDs, was modest.

- What are this research study's main findings?
- The 1995 poverty level figures for the 48 contiguous states and Washington, DC, are displayed in the chart below. (Source: Federal Register, Vol. 60, No. 27, February 9, 1995, pp. 7772-7774)

Size of Family Unit	1	2	3	4	5
Amount	$7,470	$10,030	$12,590	$15,150	$17,710

Acquisition of the GED does not, in general, bring young males out of poverty. Having read this article, what are your plans for ensuring your ability to achieve financial security?

The Relationship Between GED Score and Earnings

The research team of John Tyler, Richard Murnane, and John Willett, examined the labor market benefits (or "returns") to cognitive skills as measured by GED test scores, and whether the returns vary by gender and race. The premise of their study is that, while the average cognitive skill level of school drop outs is low, there is still considerable variation in the cognitive skills of drop outs. They ask: Do higher cognitive skills, as indicated by higher GED scores, translate into higher earnings?

They found that the average annual earnings of young drop outs are quite low: from a low of $9,394 for males in New York in 1995 to a high of $10,869 in Florida in 1995. Young female dropouts earned even less: $6,886 in New York in 1995 to $7,955 in Florida in 1994. These average earnings include those people who earned $0. This acts to bring the average down. It is important to include those who earn nothing because they represent people who aren't employed. The reason they aren't employed may be because they have low cognitive skills.

In their study, they found that skills do seem to matter, regardless of race or gender. Those drop outs with higher cognitive skills, as measured by higher GED scores, earned more on average than their peers with lower scores, after five years in the labor market. This varied from group to group: females saw a higher return to cognitive skills than did males. People of color saw a higher return to cognitive skills than did whites.

Since, as the previous study showed, the GED does result in some benefit in the labor market, they then tried to eliminate the effect of the GED. They found that, among those drop outs who scored below the passing level for the GED, those with higher scores (but not enough to get the GED) earned on

average about $1,000 (or 10%) more than non-passers with lower test scores. This was true for all groups except for white females.

The research team also looked at GED recipients and found similar patterns. Those GED holders with higher GED scores earned, on average, $900 to $1,400 more per year, again a 10% gain over those with lower (but passing) GED scores. Only white males did not experience this gain.

So, in most cases, cognitive skills do result in a return in the labor market. But, the authors of this study caution, earnings are, on average, still pretty low.

- What are this research study's main findings?
- Would this tend to encourage high school students to drop out, or to stay in high school? Why or why not?
- Would it encourage young people studying for their GEDs to work harder? Why or why not?

The Signaling Effect of the GED

The previous studies discussed here, as well as other studies, have shown that the GED provides at least a modest economic return. Researchers were not able to ascertain, however, whether the economic return was realized because of the GED, or because of other, less tangible factors such as motivation, that the GED holders may have. The research group of Tyler, Murnane, and Willett used the fact that some states required higher scores to pass than others did to examine the impact of the GED credential rather than other human factors on income.

A simple way to think about their research is to consider two states with comparable economies and different score requirements for passing the GED (one state has higher requirements). The researchers looked at earnings of GED test takers who had the same scores in the two states. In the state with the lower passing standard, the test takers received the GED. In the other state, they did not. Keep in mind that both groups, therefore, were only "on the margin" of passing. In other words, they were low scoring passers, or high scoring non-passers, presumably with the same motivation to pass the GED. If they had changed places in terms of the states they lived in, the passers would be non-passers, and the non-passers would be passers!

The annual earnings of the white GED passers, five years after receiving the GED, were 10 percent to 20 percent more than the annual earnings of the whites who had similar cognitive skills as measured by scores on the GED and yet did not hold the GED credential.

To understand what this finding may mean, it's useful to think about the possible mechanisms that may cause the GED to affect earnings. Let's assume that preparing for the GED tests increases drop outs' cognitive skills. Economists, including those mentioned here, have shown that increased

cognitive skills leads to increased earnings. That's one mechanism, usually known as human capital development.

Another mechanism is access. Many post-secondary education programs require applicants to have either a high school diploma or a GED. If post-secondary education leads to increased earnings, and it has been shown to do so, then the entry that a GED gives to post secondary education could result in higher earnings. Whether the same is true for training is less clear.

The third mechanism, and the one that is relevant to this research, is the "signaling effect" of the GED. Employers may use the GED as a signal that tells them that GED holders will be, in the long run, more productive employees, and reward them with higher earnings. For young whites, at least, this seems to be the case.

The researchers were able to replicate this finding with similar data sets.

- What were the findings of this research?
- What does it tell us about the value of the GED as a signal to employers?
- Besides signaling, what are some other ways in which the GED can lead to increased earnings?

So What Do We Know?

It's important to keep in mind, when reviewing research, that the findings hold true only for the population group specified in the study.

We do know that the GED boosts the earnings of a number of groups in comparison to drop outs without the GED. We also know that, despite this earnings boost, it does not provide the holder with earnings similar to that of high school diploma holders. Nor does it assure what has been come to be called a "living wage."

We know that the GED boosts earnings in a number of ways. If, in studying for the GED, someone's cognitive skills are increased, that is rewarded in the labor market. And, the GED can provide access to post-secondary education, a valuable commodity in the labor market. Third, the GED can provide employers with a signal that the holder is a worthwhile candidate for employment. We don't know if this mechanism holds true across races and cognitive ability.

What Does that Mean for Educational Policy, Program Design, and Instruction?

The research we have examined here should suggest to policy makers that, while the GED does help those who have dropped out, every effort should be made to prevent adolescents from leaving high school. The "alternative credential" of the GED is a useful, but not equal credential to a traditional diploma. (Those with strong cognitive skills in high school should especially pay heed to this information, because the GED does not differentiate them from drop outs with strong cognitive skills who don't get a GED.) Policy makers

should consider whether the availability of the GED at the age of 18 seems like an easy alternative to high school and is, in effect, drawing students out of school.

Program designers and curriculum developers should keep in mind that, despite the earning power the GED offers to many groups, GED holders, on average, do not earn enough to move themselves out of poverty. Post-secondary education is necessary for that. This means that GED students interested in better jobs should understand from the point of entry that the GED is a means of entry into further education, not an end in itself. Courses should be designed to prepare students academically and socially for the transition into higher education.

References

All information for this article was drawn from the following research reports and journal articles:

Murnane, R., Willett, J., Tyler, J (1999) "Who Benefits from Obtaining a GED? Evidence from High School and Beyond." *The Review of Economics and Statistics* 82, Issue 1 (February 2000): 23-37.

Murnane, R., Willett, J., Boudett, K.P., (1997). "Does a GED Lead to More Training, Post-Secondary Education and Military Service for School Dropouts?" *Industrial and Labor Relations Review*, Vol 51, No. 1.

Murnane, R., Willett, J., Boudett, K.P., (1995), "Do High School Dropouts Benefit from Obtaining a GED?" *Educational Evaluation and Policy Analysis*, Vol 17, No. 2 (133-147).

Tyler, J., Murnane, R., Willett, J. (1999) "Estimating the Labor Market Signaling Value of the GED." *The Quarterly Journal of Economics* 115, no.2.(1999): 431-468.

Tyler, J., Murnane, R., Willett, J. (1999) "NCSALL Reports #15 Cognitive Skills Matter in the Labor Market, Even for School Dropouts." Cambridge, MA: NCSALL.

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John Comings, Director
NCSALL
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